Claims

1. A device for determining the quality of fuel for an internal combustion engine, having
a pressure sensor (1) for measuring the pressure (p) in a fuel container,
and
a temperature sensor (4) for measuring the temperature (T) in a fuel container,
an evaluation unit (5) with inputs that are connected to the pressure sensor (1) and the temperature sensor (4) for determining a quality value (Q) representing the fuel quality,
characterized in that
the evaluation unit (5) determines the quality value (Q) as a function of the temperature (T) and the pressure (p) in the fuel container in that the evaluation unit (5) derives the quality value (Q) therefrom.

2. The device as claimed in claim 1,
characterized in that
the evaluation unit (5) comprises a first processing unit (6-9) which has inputs that are connected to the pressure sensor (1) and the temperature sensor (4) and which determines, as a function of the pressure (p) and temperature (T) in the fuel container, a gas emission characteristic value (T_{TH}) representing the gas emission behavior of the fuel, and
the evaluation unit (5) comprises a second processing unit (10) which has an input that is connected to the first processing unit (6-9) and which determines the quality value (Q) of the fuel as a function of the gas emission characteristic value (T_{TH}).

3. The device as claimed in claim 2,
characterized in that
the first processing unit (6-9) comprises a differentiator (6) which determines the rate of change in the pressure (p) in the fuel container.

4. The device as claimed in claim 3,
characterized in that
the first processing unit (6-9) comprises a comparator unit (8) which has inputs that are connected to the differentiator (6) and which compares the rate of change in pressure in the fuel container with a preset threshold value.

5. The device as claimed in claim 4,
characterized in that
the evaluation unit (5) comprises a sample-and-hold device (9) having a sampling input and a control input, the sampling input being connected to the temperature sensor (4), while the control input is connected to the comparator unit (8).

6. A method for determining the quality of fuel for an internal combustion engine, comprising the following steps:
- Measuring pressure (p) and temperature (T) in a fuel container, while the fuel is in a fuel container,
- Determining a quality value (Q) representing the fuel quality

characterized in that
the quality value (Q) is determined as a function of the measured temperature (T) and the measured pressure (p) in the fuel container in that the quality value (Q) is derived therefrom.

7. The method as claimed in claim 6,
comprising the following steps:
- Determining a gas emission characteristic value (T_{TH}) representing the gas emission behavior of the fuel as a function of the temperature (T) and the pressure (p) in the fuel container,
- Determining the quality value (Q) of the fuel as a function of the gas emission characteristic value (T_{TH}) determined for the fuel.

8. The method as claimed in claim 7,
comprising the following steps:
- Determining the rate of change in pressure (dp/dt) in the fuel container,
- Determining the gas emission characteristic value (T_{TH}) as a function of the rate of change in pressure (dp/dt) in the fuel container.

9. The method as claimed in claim 8,
comprising the following steps:
- Comparison of the rate of change in pressure (dp/dt) in the fuel container with a preset threshold value (dp/dt_{MIN}),
- Determining the gas emission characteristic value (T_{TH}) as the temperature in the fuel container at which the preset threshold value (dp/dt_{MIN}) for the change in pressure is reached or exceeded.

10. The method as claimed in at least one of the claims 6 to 9, characterized in that
the fuel container is closed off during the measurement of the pressure and the temperature.

11. The method as claimed in claim 10,
characterized in that
the fuel container has tank ventilation that is shut off during measurement of the pressure (p) in the fuel container.

12. The method as claimed in at least one of the claims 6 to 11,
characterized in that
the internal combustion engine is switched off during measurement of the pressure (p) in the fuel container.

13. The method as claimed in at least one of the claims 6 to 12,
characterized in that
fuel is injected into a combustion chamber of an internal combustion engine as a function of the quality value.